ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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PAT QUINN, GOVERNOR JOHN J. KIM, INTERIM DIRECTOR

217-524-1655

April 10, 2012

Mr. Thomas R. Short, Jr.
United States Environmental Protection Agency
77 West Jackson Boulevard
Mail Code S-6J
Chicago, Illinois 60604-3590

Re: 1358070001- Montgomery County
Eagle Zinc National Priorities List Site
ILD 980 606 941
Superfund/Technical

Dear Mr. Short:

Attached to this letter is the signed copy of the Illinois Environmental Protection Agency's concurrence for the Explanation of Significant Differences (ESD) for the Eagle Zinc Company National Priorities List (NPL) Site Operable Unit 1 (OU 1) in Hillsboro, Illinois.

If you should have any questions, need any additional information or wish to discuss this matter further, please contact me at 217-524-1655 or via electronic mail at: clarence.smith@illinois.gov.

Respectfully,

Clarence L. Smith, Manager
Federal Site Remediation Section
Division of Remediation Management
Bureau of Land

cc: Bureau of Land File
Scott Phillips
Bob Carson
Doyle Wilson

4302 N. Main St., Rockford, IL 61103 (815)987-7760
595 S. State, Elgin, IL 60123 (847)608-3131
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Explanation of Significant Differences

Eagle Zinc Site
EPA ID: ILD980606941
Hillsboro, Illinois

U.S. Environmental Protection Agency
Region 5

Executive Summary

The U.S. Environmental Protection Agency (EPA) is issuing an Explanation of Significant Differences (ESD) to document the remedial action cost estimate increase for the Operable Unit 1 (OU 1) remedial action selected in the interim record of decision (ROD). The cost estimate presented in a ROD is expected to be accurate to +50%, -30%. The cost estimate increased 66% above the cost estimate in the ROD, a significant difference. This ESD serves to document the changes to the remedial action cost estimate and provide an explanation for the significant difference.

The Eagle Zinc Site encompasses about 132 acres, 30 acres of which consists of buildings and structures. The Site is divided into two operable units (OUs). OU 1 is an interim action that addresses the contamination associated with the buildings and structures on the Site. OU 2 addresses the soil, ground water, surface water, and residue on the Site. The focus of this ESD is OU 1, the interim remedial action. This is the first ESD for the Site.

putrescible and asbestos containing materials off-site. Nothing about the OU1 remedy has changed except for the increase in estimated costs.

D. Summary of Circumstances Necessitating this ESD

The circumstance necessitating this ESD is the 66% increase in estimated remedial action costs from the ROD CE to the current CE (which was generated as part of the remedial design). The CE in the final design, however, is generally a more accurate cost estimate. The final design CE for the interim Remedial action is $6,202,205. This presents a $2,473,363 increase (66%) from the ROD cost estimate of $3,728,842. The CE provided in the ROD anticipated the remedial action to cost $3,869,733. However, recalculation of the line items presented in the ROD CE indicated that the correct total capital cost was $3,728,842 (See Table 2).

There are three main reasons for the difference between the two CEs. First, a steel salvage credit was added to the ROD CE, but EPA determined the credit was too uncertain and should not be included in the CE for the design – this change accounts for a $726,040 increase in the RA costs. Secondly, pre-design field work provided new information about the buildings and materials that altered the amount and type of treatment and disposal – producing a cost increase of $726,947. Lastly, the ROD CE did not include the cost of remedial action oversight by a primary contractor – accounting for an increase of $1,020,376. A more detailed explanation of these modifications to the CE is provided in section IV.

E. Agency Determination

EPA, in consultation with IEPA, has reviewed the changes to the Eagle Zinc Site interim remedial action in accordance with CERCLA and EPA policy and guidance. EPA has determined that the changes to the OU 1 Interim ROD remedial action are significant, but do not fundamentally alter the overall interim action for the Site with respect to scope, performance, or cost. The modified remedy complies with the NCP and the statutory requirements of CERCLA and remains protective of human health and the environment. Thus, it is appropriate to issue an ESD to document the changes resulting in that modification.

F. Administrative Record

In accordance with Sections 300.435(c) and 300.825(a)(2) of the NCP, this ESD and supporting documentation will become part of the administrative record for the Site.

The administrative record is available for public review at the following location:

EPA Region 5 Records Center
77 West Jackson Boulevard – 7th Floor
Chicago, IL 60604

investigation/feasibility study (RI/FS) was focused on the non-operating areas of the Site. Eagle-Picher, Sherwin-Williams, and Eagle Zinc completed a draft RI in 2005.

In reviewing the draft RI and FS, EPA and IEPA recognized that additional investigation was needed in and around the plant buildings since the plant was no longer operating. EPA, in consultation with IEPA, decided to establish a new operable unit to address the plant building area (OU 1) and to consider the area within the original scope of the draft RI/FS as OU 2. A supplemental remedial investigation and feasibility study for OU 2 is currently underway. Since the focus of this ESD is the OU1 interim ROD, the discussion of contamination will be limited to OU 1.

IEPA completed x-ray fluorescence (XRF) sampling in the spring of 2008 to investigate the buildings. Approximately one half of the samples were collected inside of the buildings and the remaining samples were collected outside of the building structures. Ten samples were also collected and submitted for confirmatory laboratory analysis of total metals and toxicity characteristic leaching procedure (TCLP) metal analysis. Most of the confirmatory samples taken were determined to be characteristically hazardous for lead. The highest concentration for lead detected was 56,576 ppm. The location of this sample is in the central area between the building structures. Other metals reported include arsenic, zinc, copper, nickel, chromium, barium and cadmium.

About 70% of the samples collected within the building structures exceeded EPA's target screening level of 800 ppm, while 100% of the samples collected outside of the building structures exceeded the 800 ppm screening level. Results of the confirmatory sampling results were two to five times greater than the field XRF results. Ninety percent of the TCLP samples exceeded the TCLP limit for lead. The contaminated materials that are characteristic RCRA hazardous wastes will be handled separately from the non-hazardous waste in the interim response. The majority of the samples taken inside the building were taken from the floors or higher flat surfaces. The actual building debris, although contaminated, is not likely to be classified as RCRA hazardous waste. Potential risks exist for people coming into contact with the residue piles and contaminated building materials. Also, these buildings present a physical hazard due to their poor structural integrity.

As part of the effort to quickly mitigate risk associated with the highly contaminated buildings and Site soils, EPA conducted a removal action between December 2008 and January 2009. The removal action consisted of fence installation around the most accessible areas of the Site. About 2,150 feet of fencing and signage were installed between December 15, 2008 and January 9, 2009. According to community members, this remedial measure has decreased the amount of trespassers, but some people continue to trespass.

Hazardous Waste Stored Onsite Until Final Remedy	No Change
Cost is $3,728,842	Cost is $6,202,205 (66% difference)

IV. Significant Differences to the OU 1 Interim ROD Remedial Action

A. Modification of the Remedial Action Cost Estimate

The ROD CE projected that the selected remedy, building demolition and onsite management of debris would cost $3,728,842. The most recent cost estimate, the remedial design CE, expects the actual remedial action costs to be 66% more than originally anticipated; the RA will cost $6,202,205 to implement. There are three reasons for the significant increase in the remedial action cost estimate: steel recycling credit, new information, and RA oversight costs. For a more detailed breakdown of cost changes refer to Table 2. Nothing about the OU1 remedy has changed except for the increase in estimated costs.

The CE provided in the ROD included the anticipated amount of credit the Agency would receive by recycling the steel from the buildings and structures onsite. The credit was estimated to be about $726,040. This estimate was derived from two assumptions: 1) 2,593 tons of steel could be recycled for profit, and 2) the price of steel per ton would be $280. EPA decided not to include the estimated steel credit in the remedial design cost estimate because the assumptions regarding the amount of money recycling the steel would produce are highly variable. The estimated price of steel used for the ROD CE is out dated for the current economic climate. It is very difficult to predict how much funding credit EPA may yield from the planned recycling. In addition, the funding that will be needed to implement the RA will be needed before any recycling credit is realized. The remedial action needs to be fully funded no matter how much, if any, proceeds are received to offset those costs. The removal of the steel credit from the RA cost estimate provides a more accurate cost estimate and ensures that the remedy can be fully implemented when funding becomes available. This change increased the overall remedial implementation costs by $726,040.

Another reason why the CE in the final design is higher than the ROD CE is because the design process revealed new information, which was then incorporated in the current CE. Pre-design activities were conducted at the Site to further characterize the buildings and structures to be demolished. The results indicated that significant decontamination and waste management activities were required for the safe decommissioning and demolition of the buildings. These activities were underestimated or not included in the ROD CE due to lack of building-specific information. The pre-design sampling work found more asbestos, universal waste, and hazardous waste inside the buildings than expected. Other costs not included in the original CE estimate but incorporated into the most recent CE include:

change, as documented in the ESD, is in accordance with CERCLA Section 121 and is protective of human health and the environment. The change complies with federal and state requirements that are applicable and or relevant and appropriate, use permanent solutions to the maximum extent practicable, and is cost-effective. Since hazardous waste will remain onsite at levels that do not allow for unrestricted use and unlimited exposure, five-year reviews of the remedy will be required.

VII. Public Participation Compliance

EPA shall publish a brief description of the ESD in the local newspaper as required by the NCP at 40 C.F.R. Section 300.435 (c)(2)(i)(B). This ESD will also be placed in the administrative record files and information repository which are located at the Hillsboro Public Library and in the EPA Region 5 office as required by the NCP Section 300.435(c)(2)(i)(A). See Section I, paragraph F, of this ESD for further details about the information repositories. An electronic copy of this ESD will be available online at http://www.epa.gov/region5/sites/eaglezinc/.

VIII. Declaration by EPA

EPA has determined that the modifications to the OU 1 Interim ROD for the Eagle Zinc Site documented in this ESD are significant, but do not fundamentally alter the overall Site remedial action with respect to scope, performance, or cost. I therefore approve the issuance of this ESD for the Eagle Zinc Site and the changes to the remedial action stated herein.

Richard C Karl

Richard C. Karl, Director
Superfund Division
U.S. EPA Region 5

5-5-11

Date

IX. Declaration by Illinois EPA

U.S. EPA has determined, and Illinois EPA concurs, that the adjustments to the Eagle Zinc NPL site ROD provided in this ESD are significant with respect to an increase in cost, but do not fundamentally alter the overall site remedial action with respect to scope or performance. I therefore approve the issuance of this ESD for the Eagle Zinc NPL site and the changes to the remedial action stated herein.

Scott O. Phillips, Chief
Bureau of Land
Illinois Environmental Protection Agency

4/6/12
Date

IX. Declaration by Illinois EPA

U.S. EPA has determined, and Illinois EPA concurs, that the adjustments to the Eagle Zinc NPL site ROD provided in this ESD are significant with respect to an increase in cost, but do not fundamentally alter the overall site remedial action with respect to scope or performance. I therefore approve the issuance of this ESD for the Eagle Zinc NPL site and the changes to the remedial action stated herein.

Scott O. Phillips, Chief
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Date